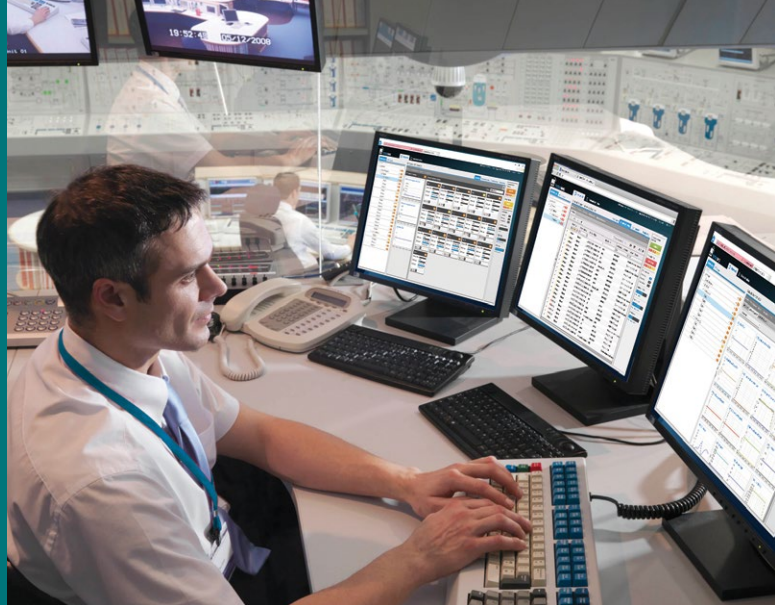
WAVESTREAM

TOTAL NMS

Business-driven Total Network Management



BUSINESS-DRIVEN NETWORK MANAGEMENT

Satellite network operators require network management tools that align with business imperatives, maintain quality of service, and ensure that network resources are utilized properly… all with minimal overhead. This is why Gilat's management system has been designed to rapidly introduce services, effortlessly maintain the network, and optimize network resource utilization.

Today's operators also require support for dynamic operational models. For instance, they often host a shared infrastructure to support virtual network operators (VNOs) who require varying degrees of control over their own services.

To answer these operational challenges, Gilat has developed TotalNMS, a comprehensive management system for SkyEdge II-c, supporting both advanced X-Architecture-powered networks as well as smaller networks. We've rolled a complete set of network management functions into one simplified interface, streamlining service fulfillment and assurance operations, to save time, reduce costs, and serving operators' business needs.

WHATEVER YOUR NETWORK'S SIZE, WE'VE GOT IT COVERED

TotalNMS has been designed to effectively support both smaller and larger-scale distributed VSAT networks, such as HTS. The scalable SkyEdge II-c architecture allows operators to start small, deploying exactly the equipment needed for the initial business case. The system can be easily expanded to support growing network requirements.

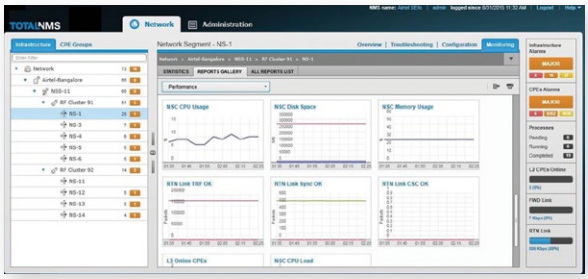
Operating large networks effectively means automation of NOC processes. This requires smooth synchronization between the network management system and the operator's provisioning and global monitoring systems.

To achieve this, TotalNMS provides SOAP and SNMP northbound interfaces to operational and business support systems (OSS/BSS).

In addition, detailed data records per terminal are generated and delivered to the operator's billing system, enabling usage-based billing for end customers.

BENEFITS

- **Centralized global management**
- **High scalability for any size network and any number of teleports**
- **Customized roll-based user administration**
- **Simplified service fulfillment**
- **Effective troubleshooting tools**
- **Comprehensive service assurance**



NOT JUST A MANAGEMENT TOOL – A BUSINESS TOOL

We know the age of infrastructure sharing is upon us. TotalNMS is designed to efficiently support hub owners who wish to expand their business by offering hosted services to Virtual Network Operators (VNOs).

TotalNMS supports several VNO models, as described in the following diagram:

- **Hardware VNOs** – VNO service utilizing dedicated Tx/Rx hardware components with inbound and outbound MHz capacity
- **Software VNOs** – VNO service utilizing shared hub resources with inbound and outbound Mbps capacity
- **Cloud VNOs** – VNO service over multiple spot beams and satellites, leveraging a shared pool of network functions, data processing, and space segment spectrum

With TotalNMS, Host Network Operators (HNOs) benefit from fast and reliable network resource and access rights allocation. In addition, HNOs receive detailed reporting on their VNOs' network performance and usage.

By equipping VNOs with a logical or physical separate network and independent management capabilities, they can autonomously run their own services without any upfront investment in teleport infrastructure.

WE KNOW WHERE YOU'RE COMING FROM

We've been in this business a long time and have our finger on the pulse of the satellite industry. We listen, and at the same time we draw from our own experience managing networks on behalf of our customers. This rich knowledge enables us to offer features that reflect the everyday needs of NOC operators.

Simplified Service Fulfillment

TotalNMS provides network operators with an intuitive interface for network setup, as well as rapid introduction and simple modification of services.

The network is configured per service rather than per system component, simplifying the operator's task and avoiding the need to access internal system architecture.

Comprehensive service plans are centrally configured and effectively applied to all VSATs, enabling on-the-fly modification of services according to business imperatives.

Effective Troubleshooting Tools

A dashboard displaying current alarms and real-time status of the network's main key performance indicators (KPIs) ensures quick identification of network degradation.

These features facilitate troubleshooting processes and reduce downtime.

Comprehensive Service Assurance

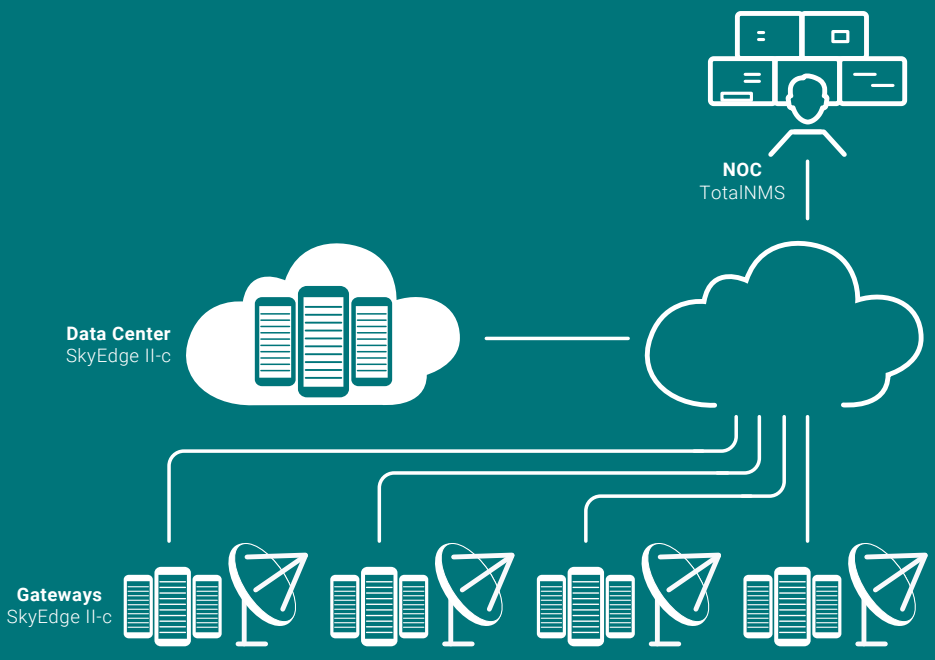
Detailed traffic and performance measurements are collected periodically to provide immediate and long-term network behavior analysis for service assurance and network resource utilization.

Reports are displayed in various graphical and tabular formats and can be exported to CSV and HTML.

A user-defined set of these reports can be displayed on a single screen for efficient network monitoring.

Customized User Administration

To enable varying degrees of monitoring visibility and control, operators can assign highly granular, predefined or customized user authorization levels. They can precisely designate permissions per task and per network resource for both internal and VNO users.



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